



PAT MCCRORY

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Solid Waste Section

January 27, 2016

Mr. Bobby Darden
Executive Director
Costal Regional Solid Waste Management Authority (CRSWMA)
Post Office Box 128
Cove City, North Carolina 28523

Re: Comments on the Permit Amendment Application for Continued Operations
Tuscarora Long-Term Regional Landfill- IRL, Phases 1 through 3
Craven County, North Carolina
Permit No. 2509-MSWLF-1999, Doc ID No. (DIN) 25342

Dear Mr. Darden:

The Division Waste Management (DWM), Solid Waste Section (SWS) received the copy of the permit amendment applications titled as:

- *Permit Renewal Application, Coastal Regional Solid Waste Authority (CRSWMA) Tuscarora Long-Term Regional Landfill*. Dated November 2015. Prepared by Joyce Engineering, Inc. in Greensboro, NC. The hard copy was received by the SWS on November 19, 2015 (DIN 25278).
- *Permit Renewal Application, CRSWMA Tuscarora Long-Term Regional Landfill*. Revised December 2015. Prepared by Joyce Engineering, Inc. in Greensboro, NC. The revised application includes the Operations Manual for the Large Type 1 Composting Facility, Permit Number 2511-COMPOST-2000 (DIN 25403).

By submitting the above-referenced permit amendment applications (Permit Applications), the CRSWMA requests the SWS approval of continued operations of the Tuscarora Long-Term Regional Landfill- IRL, Phases 1 through 3. The SWS conducted a review of the Permit Application according to the North Carolina Solid Waste Management Rule (Rule) 15A NCAC 13B, Article 9 of Chapter 130A of the North Carolina General Statutes (NCGS 130A-290, et seq.), and the conditions contained in the current Permit to Operate (DIN 16514) dated June 06, 2012. After completing a review on the Permit Applications, the SWS has several comments on the application document which are stated below. Your timely responses to the comments will expedite the completion of the reviewing processes.

Facility Plan

1. (Section 3.2, Operating Capacity) What is the remaining capacity of the Phase 3 based on the latest (June 30, 2015) survey result in consistent with Drawing No. FP-09? What is estimated remaining service life of the Phase 3?

2. (Section 3.2, Soil Resources) The volume ratio of waste to daily cover soil was 7 to 1 which was used for the calculations of the landfill capacity and required soil amount for landfill operations in the previously permit application (DIN 12653) approved January 25, 2011. Please provide explanation (s) why this ratio changes to 20 to 1.

Operations Plan

3. (Section 2.1, Active Area) Two sumps for Phases 3 are located on the north side of the cells according to the Engineering Plan Drawing No. EP-02. Please revise the description accordingly.
4. (Section 5.3) Please provide explanation (s) why the volume ratio of waste to daily cover soil changes to 20 to 1 (see Comment No. 2).
5. (Section 9.3) Please describe the leachate sample locations which must be identified on the Operations Plan Drawings.
6. (Section 9.4 Leachate Disposal) If available, please provide the layout and detail drawings including forcemain alignments/runs, the entrance or connection location where the leachate drains from the lagoon into the sewer line inside the landfill property. However, if the project is in the planning stage, the as-built drawings including the above-mention items must be provided the SWS upon available. Please add this requirement to this Section.

Appendix VI-4 – Type 1 Yard Waste Composting – Operational Manual

7. (Section 1.3) The contact info – address and phone number of the SWS has been changed to:
 - Mailing Address: 1646 Mail Service Center, Raleigh NC 27699-1646.
 - Physical Address: 217 West Jones Street, Raleigh NC 27603.
 - Phone Number: 919 -707-8200.Please place the update info to this Section.
8. (Section 2.2) Please correct the typographic errors observed in this Section.
 - i. The subsection 2.3.1 – Design Capacities and Product Data is likely the subsection 2.2.1.
 - ii. The Site Plan is likely included in Appendix 3, not in Appendix 6. Please make necessary corrections in Sections 2.2.1 & 2.2.2.
 - iii. Appendix 6, not Appendix 7 likely contains a table summarizing product quality.
9. Please describe the structures (such as the sediment basin and the covered building), measures, and /or practices that are implementing to control surface water run-on and run-off and the approaches to collect, store, treat, and /or dispose of leachate that is generated at this composting facility according to Rules 15A NCAC 13B .1405(a)(7) and .1406(2), (3) & (4).

10. (Section 2.3.1) The referenced Section 2.4.14(c) in the last paragraph of the Section 2.3.1 is not available in the Appendix VI-4 – Type 1 Yard Waste Composting – Operational Manual. Please provide the referenced Section.
11. (Section 2.3.3) Please describe the implementation of the minimum distance requirement for adequate access of firefighting equipment [Rule 15A NCAC 13B .1404(a)(8)].
12. (Section 2.4.3) Please correct the typographic errors observed in this section.
 - i. The referenced Rules .1408(3) and 1406(9)(c) don't exist and are likely typos. Please make the necessary corrections.
 - ii. The DENR officially became the Department of Environmental Quality (DEQ) on Sept. 18, 2015 when Governor McCrory signed the 2015-2016 state budget into law. Please use the correct department name in the Section.

Closure & Post-Closure Plan

13. The SWS records show that the permanent closed areas of the landfill are IRL (20.2 acres), Phase 1 (20.5 acres) and the west slope area of Phase 2 (7.3-acre). Phases 2 that has the approved waste footprint of 17.2 acres has approximately 9.9-acre remaining area subjected to final/permanent closure. Therefore, please
 - i. Submitting the update Section 1.1.2 of the Closure Plan. According to the Rule 15A NCAC 13B .1629(b)(1), the largest area of the landfill might be closed in the next permit cycle should be 29.6 acres including Phases 2 remaining area (9.9 acres) and Phase 3 area (19.7 acres).
 - ii. Please revise the closure area in the closure cost estimates in Appendix VII-2 accordingly. The costs shall be in 2015 dollar values (Section 1.7). The associated costs in Appendix VII-2 that were likely approved in 2011 must be adjusted annually (from 2012 through 2015) for inflation accordingly. The inflation factor can be found in the SWS website <http://portal.ncdenr.org/web/wm/sw/financialassurance>.
14. The Post-Closure Plan must describe the requirements of inspection, maintenance, and decommissioning of the LFGCCs.
15. (Section 2.1) The Facility Contact must be updated accordingly.
16. (Section 2.8 & Appendix VII-6) The costs for the 30-year post-closure cares shall be in 2015 dollar values. The associated costs in Appendix VII-6 that were likely approved in the 2011 must be adjusted annually (from 2012 through 2015) for inflation accordingly. The inflation factor can be found in the SWS website <http://portal.ncdenr.org/web/wm/sw/financialassurance>.

17. The costs for surface water monitoring are not included in the Post- Closure Cost Estimates. Please revise the cost estimate by adding the requested cost item.
18. (Appendix VII-6, Post- Closure Cost Estimates) Please address the following concerns associated with the costs of the landfill gas monitoring system:
 - i. Why does the landfill gas monitoring system maintenance last for 20 years, not 30 years required by the rules 15A NCAC 13B .1627(d)? If the costs are directly related to the existing landfill gas collection and control system (LFGCCs), the 20-year period may be acceptable, but not for the on-site explosive gas monitoring & reporting which must be conducted quarterly for at least 30-year period. Please separate the costs for LFGCCs and explosive gas monitoring.
 - ii. What are the costs for decommissioning of the LFGCCs? Please add the costs to the post-closure cost estimates.
19. (Appendix VII-6, Post- Closure Cost Estimates) Please address the following concerns associated with the costs for Leachate Management:
 - i. The costs associated with semi-annually leachate sampling are not available.
 - ii. The leachate amount of 0.089 gallons per acre per day is not suitable for the proposed site closure scenario. The referenced leachate amount would be generated (from HELP model) when the height of waste is 200 feet (Profile 5, Appendix IV-3). The maximum waste height at a probable closure for Phases 1 - 3 in this permit cycle is likely ranging from 40 to 80 feet (referring Drawing No. FP-09). Therefore, the associated costs for leachate management are calculated based on the questionable assumptions. Please provide the reasonable estimate leachate amount and revise the cost estimate.
 - iii. (Continue the previous Comment No. 19ii) After completing the proposed leachate disposal project, the leachate would be discharged into the city sewer system according to the Leachate Agreement between the City of New Bern and CRSWMA. The costs associated with leachate disposal might be eliminated from the 30-year post-closure care cost estimates after CRSWMA submits the SWS a permit modification application including the as-built drawings (see Comment No. 6) requesting an approval of cost reduction.
20. (Appendix VII-6, Post- Closure Cost Estimates) Please add the following the costs to the Routine Maintenance and Repairs: fencing, gates, & signage, access roads toward monitoring locations, stormwater, erosion, and sedimentation control facilities, leachate seeps, integrity of the final cap system (Sections 2.3 of the Post-Closure Plan).

According to NCGS 130A-295.2(h1), the minimum cost in the amount of two million dollars for potential assessment and corrective action (PACA) at the facility, which is additional costs to the closure and post-closure care activities, must be included to the CRSWMA financial assurance

(Rule 15A NCAC 13B .1628). Please add this PACA requirements & cost to the Closure & Post Closure Plans

The CRSWMA should submit the SWS the written response to each above-mentioned comment which would be incorporated into the revised Permit Amendment Application (including drawings and/or tables, if applicable). One electronic copy (pdf format) of the entire revised Permit Application and the hard copy of the revised portions of the Permit Application should be submitted to the SWS for a review. The SWS is highly appreciating your cooperation on this matter.

Sincerely,

A handwritten signature in black ink, appearing to read 'M. Chao', with a stylized, cursive script.

Ming-Tai Chao, P.E.
Environmental Engineer
Division of Waste Management, NCDEQ

cc:

Amy Davis, P.E., Joyce
Christine Ritter, DWM
Jason Watkins, DWM

Ed Mussler, Permitting Branch Supervisor
Ray Williams, DWM
Central Files